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(56) Documents Cited by ISA

US 4251811 A US 4139846 A US 4138670 A

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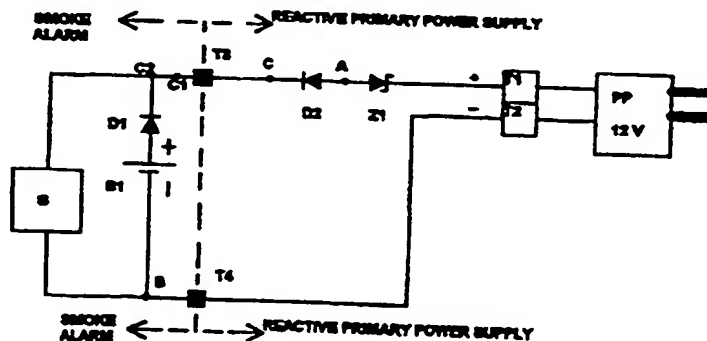
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## (54) Smoke alarm system with standby battery and reactive primary power supply

(57) A smoke detection and alarm system including one or more low cost battery operated smoke alarms (5) fitted with internal non-rechargeable standby batteries (B1), a reactive primary power supply derived from mains supply, and connecting means for connecting the reactive power supply to each of the system's smoke alarms, the system being characterized in that (1) said reactive primary power supply comprises: (a1) means for providing a d.c. supply of slightly higher than the smoke alarm standby battery voltage; and (a2) means for detecting the higher than quiescent current supplied by the reactive power supply when any of the smoke alarms connected as part of the system is in alarm or in self-test mode; and (a3) means of lowering the d.c. supply voltage made available to power the system's smoke alarms when a higher than quiescent current is detected; and (2) said smoke alarms comprise: (b1) means by which all the current required under quiescent condition, with primary power available, is supplied by the reactive primary power supply; and (b2) means by which a very high proportion of the current required when any of the system's smoke alarms is in self-test mode is supplied by the smoke alarm battery as the d.c. voltage of the reactive primary power supply drops in self-test mode; and (3) all the above system's characteristics resulting in: (c1) the condition of the standby battery of each smoke alarm being tested at regular intervals to provide an audible warning if the battery is depleted, disconnected or missing; and (c2) the standby battery of each smoke alarm supplying quiescent current only for very brief periods to result in the standby batteries having a longer life well in excess of the average one year life common with existing systems; and (c3) the system being of very low overall cost and of much improved reliability.



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